

## REMARKS

Applicant respectfully requests reconsideration of the present application.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate status identifier.

Claims 1-22 remain in this application and claims 1, 8 and 9 was amended herewith. Support for these amendments can be found, *inter alia*, in paragraphs 34 and 43 and in Table 1. Claims 23-40 are added by this amendment. New claims 23-28 are supported, e.g., at least at paragraphs 85 and 130-136. New claims 29-39 are supported, e.g., at least at paragraphs 144-156. New claim 40 is supported, *inter alia*, in Table 1.

### Interview

Applicant sincerely thanks the Office for extending the courtesy of a Personal Interview held on July 18, 2006. During the Interview, the Office indicated that the § 103(a) rejection over U.S. patent 5,164,007 would be withdrawn. The summary of the interview could be gleaned from these remarks.

### Claim for Priority

The benefit of priority as to the claim was not accorded. (Office action dated 04/20/05, page 2). As for the claimed transparency of independent claim 1, it is submitted that support is found in the provisional application, e.g., at least at lines 8-15 on page 6, at lines 28-4 on pages 27-28, and at lines 3-11 on page 35. As for the claimed multifunctionality of independent claim 1, it is submitted that support is found in the provisional application, e.g., at least at line 24 on page 42 through line 2 on page 43. Thus, the present application should be accorded the priority date of U.S. Provisional Application 60/446,234, filed on February 10, 2003.

### Claim Rejections – 35 U.S.C. § 102(b)

Claims 1-3, 8, 10, 12, 14, 15 and 18-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 4,629,513. A reference anticipates a claim if and only if the

reference describes the claim or an embodiment falling within the scope of the claim. MPEP § 2131.

Here, the independent claim 1 has been amended to more clearly point out the claimed invention. According to the Office, however, the '513 patent teaches a nanopigment that is "used to color surface coatings." (Office action, page 2). It is submitted that the '513 patent does not teach or offer any motivation for methods of coloring compositions of matter using multifunctional nanopigments that simultaneously comprise two or more metals, wherein the compositions of matter are not coatings, amongst other features of the claim. Thus, this rejection should be withdrawn.

**Claim Rejections – 35 U.S.C. § 102(b)**

Claims 1, 2, 5, 10-12, 15 and 18-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 6,060,154. Here, the independent claim 1 has been amended to more clearly point out the claimed invention. According to the Office, however, the '154 patent teaches "coating compositions for glass and plastic articles where the composition is coated onto the article." (Office action, page 3). It is submitted that the '154 patent does not teach or offer any motivation for methods of coloring compositions of matter using multifunctional nanopigments that simultaneously comprise two or more metals, wherein the compositions of matter are not coatings, amongst other features of the claim. Thus, this rejection should be withdrawn.

**Claim Rejections – 35 U.S.C. § 102(b)**

Claims 1, 2, 6, 7, 9, 11-13 and 17-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 6,110,266. Here, the independent claim 1 has been amended to more clearly point out the claimed invention. According to the Office, however, the '266 patent teaches nitrides that "enhance the hardness of the coating," wherein the coating is "an ink comprising mixtures of nitrides of titanium, zirconium, hafnium, silicon, germanium, or tin." (Office action, page 4). It is submitted that the '154 patent does not teach or offer any motivation for methods of coloring compositions of matter using multifunctional nanopigments that simultaneously comprise two or more metals, wherein the compositions of matter are not coatings, and therefore not inks or paints, amongst other features of the claim. Thus, this rejection should be withdrawn.

**Claim Rejections – 35 U.S.C. § 103(a)**

Claims 1, 4, 10, 12, 16, 18-20 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 5,164,007. Applicant thanks the Office for stating that it would withdraw the rejection over U.S. patent 5,164,007. (Interview Summary dated July 18, 2006).

**Claim Rejections – 35 U.S.C. § 102(b)**

Claims 1, 2, 4, 6, 8-10, 12, 15, 16, 18-20 and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 6,139,618. Here, the independent claim 1 has been amended to more clearly point out the claimed invention. The '618 patent specifically states that "the iron oxide hydroxide has a chemical composition:  $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$  ( $= 2\text{FeOOH}$ ), i.e., contain crystallization water therein." (U.S. Pat. No. 6,139,618, col. 1, l. 45-47). It is known that iron(III) oxide-hydroxide has the chemical formula  $\text{FeO}(\text{OH})$ . It is submitted that the nanopigment of the '618 patent does not comprise two or more metals, as recited in independent claim 1 of the present application, but merely contains  $\text{FeO}(\text{OH})$  comprising a single metal, i.e., iron. Thus, this rejection should be withdrawn.

**Claim Rejections – 35 U.S.C. § 103(a)**

Claims 1-3, 5, 8-10, 12, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 6,485,557, which issued on November 26, 2002. Here, independent claim 1 has been amended such that the domain size of the color nanopigment is less than 100 nm. Likewise, new claim 40 has been added to further specify that the domain size of the color nanopigment is less than  $1/10^{\text{th}}$  of the specific color wavelength, which is shown in Table 1 to range from 38 nm to 70 nm. As noted by the Examiner on page 5 of the outstanding Office Action, the '557 patent only discloses pigments with a particle size of 0.1  $\mu\text{m}$  (100 nm) to 5  $\mu\text{m}$ , which is larger than the color nanopigments of the claimed method. See '557 patent, col. 3, ll. 24-27. As the '557 patent does not teach the color nanopigments required by the claimed methods, this rejection should be withdrawn.

**CONCLUSION**

In view of all of the above, claims 1-40, as amended, are believed to be allowable and the case to be in condition for allowance, which action is respectfully requested. The references that were cited and not relied upon are believed to be no more pertinent than those references that were relied upon.

Applicant believes that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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